



National Search and
Rescue Secretariat

Secrétariat national
Recherche et sauvetage

Government
Publications

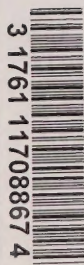
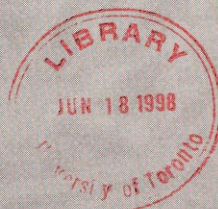
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NATIONAL
SEARCH



RESCUE
SECRETARIAT



.....1996-97 Annual Review

The mission of the NSS is to promote an efficient, effective and economical National Search and Rescue Program (NSP) in Canada by supporting, promoting and co-ordinating the activities of the federal and non-federal operational agencies which provide search and rescue services to people in distress throughout Canada's areas of jurisdiction.

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MESSAGE FROM THE EXECUTIVE DIRECTOR

The creativity and ingenuity of our team at the National Search and Rescue Secretariat (NSS) were tested in 1996-97 as we coped with a growing workload and the impact of last year's 25 per cent reduction in staff. As we reflect on the accomplishments, we can look with pride at how much was accomplished through finding new ways of doing business and new sources of revenue.

There was a renewed and exciting spirit of teamwork among the staff who willingly took on more responsibilities, enabling us to meet the needs of our partners across Canada. The team was helped by the valued involvement of volunteers in our activities — experts, students and others who all shared a deep interest in our work.



William Slaughter
Executive Director



Diane Miller
Executive Assistant

This report outlines highlights and major accomplishments of the Secretariat in 1996-97. Many of these would have been impossible to achieve without full co-operation from federal departments and agencies, provincial and territorial jurisdictions and non-government organizations. So, while the document refers to our activities and achievements, it is implicitly recounting how, in search and rescue, people across Canada have collaborated in giving the nation one of the best search and rescue operations in the world.

Search and rescue operations evolve with society. The National Search and Rescue Secretariat, along with its partners, also evolves. To keep pace, we develop strategies and plans which build on statistical data, program reviews and information exchanges that are in tune with the needs of Canadians.

R. William Slaughter

- Funded 95 New SAR Initiatives Fund projects, bringing the total since the program began to about 450, and enabled provincial organizations to gain access to New SAR Initiatives funding;
- Conducted a program review covering SAR prevention in five of the six federal departments with SAR responsibilities;
- Initiated a comprehensive Canadian Ground Search and Rescue Study;
- Created an easily updated home page on the Internet, providing an electronic "presence" where current and topical information is readily available to Internet users;
- Analyzed the impact of Canadian population trends on SAR program demand;
- Participated in a Demonstration and Evaluation Study on the benefit of using geo-stationary satellites for SAR on behalf of the COSPAS-SARSAT system;
- Established strategic needs for the New SAR Initiatives Fund;
- Represented Canada on COSPAS-SARSAT, an international co-operative venture with six satellites to detect emergency beacons;
- Promoted and supported the creation of a National Ground Search and Rescue Council of Canada;
- Expanded the advertising base of SARSCENE, the Secretariat's quarterly newsmagazine, which has put the flagship publication on a strong cost-recovery foundation; and
- Attracted more than 600 people to SARSCENE '96, the national SAR conference that included a trade show, parallel sessions and an awards banquet.

INTRODUCTION

During the drama of a land search or a sea rescue, the limelight focuses on the people directly involved. The work behind the scenes isn't given much thought. Yet, it's the invisible planning and organization that enable Canadians to achieve so many successful searches and rescues year after year.

Long after media attention has faded, analysis and reviews of incidents where people were at risk are conducted. Information is exchanged, new developments relating to search and rescue activities are reported and procedures are examined so that "next time" will be better.

Federal departments, provincial governments and a host of other organizations and groups work together with a common goal to save lives. Supporting their efforts is the National Search and Rescue Secretariat (NSS) which promotes an efficient, effective and economical National Search and Rescue Program throughout Canada by providing a central focal point and limited funding for organizations with Canadian SAR jurisdictional responsibilities.

Established in 1986, the National Search and Rescue Program is a distinct program of government. The Ottawa-based NSS supports the Lead Minister for Search and Rescue who is also the Minister of National Defence.

To meet its client needs, the NSS, with 15 staff members, focuses on both federal and non-federal activities.

Federal departments and agencies delivering search and rescue services include the Department of National Defence, Department of Fisheries and Oceans (Canadian Coast Guard), Transport Canada, Solicitor General of Canada (Royal Canadian Mounted Police), Canadian Heritage (Parks Canada) and Environment Canada (Atmospheric Environment Service).

Provincial/territorial governments provide services through Emergency Measures Organizations and police agencies. Beneath the provincial levels, many municipal police and hundreds of skilled volunteer groups complete the national SAR network.

This report highlights activities of the Secretariat in support of both the national SAR Program and its participating organizations.

FEDERAL

CO-ORDINATION DIVISION

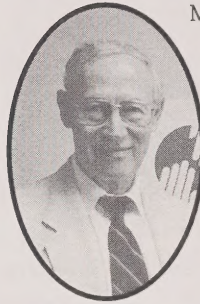
This Division works with federal departments and agencies and provides a secretariat function to the Interdepartmental Committee on Search and Rescue. Other responsibilities include:

- Management of the New SAR Initiatives Fund (NIF);
- Support for COSPAS-SARSAT;
- Development and management of the National SAR Program Management Information System;
- Statistical analysis; and
- Central agency reports.

The New SAR Initiatives Fund

The New SAR Initiatives Fund (NIF) is integral to the NSS operations and to the improvement of SAR activities across Canada. A list of projects is provided on page 15.

The NIF was created to provide financial help for projects that will increase Canadian search and rescue capability and further the goals of the SAR program. It has an annual allocation of \$8.1 million for new and continuing projects. In 1996-97, 95 NIF projects — 56 new and 39 continuing — valued at more than \$10 million were funded. Since its inception in 1988, about 450 projects valued at more than \$80 million have been funded.



Don MacCaul

Ministerial approval was obtained in 1996 for access to the NIF by provincial organizations, and funding for 1997-98 has been assured.

All regions of Canada are affected by the Fund. The NIF proposals ranged from public education and information programs to training programs and equipment development. The size and complexity of the projects varied

from a \$9,000 manual on boating emergencies to a \$500,000 implementation program to improve ocean search area predictions. All fell within four categories:

- Projects aimed at improving the response to search and rescue incidents;
- Projects that will help in the prevention of search and rescue incidents;
- Research and development efforts on equipment, forecasting and search techniques; and
- Projects that provide assistance to volunteers.



Mary Thomas

COSPAS-SARSAT

The Federal Co-ordination Division manages Canadian participation in COSPAS-SARSAT, an international co-operative of nations which has six satellites in orbit detecting emergency beacons. The system aids in locating people who are in trouble in isolated or remote areas.

The NSS is supporting a demonstration project to evaluate the use of geo-stationary satellites over the equator which may prove to have greater coverage and a messaging time advantage over other SAR satellite facilities. The trial involves assessing power requirements, time advantage and other critical elements in search and rescue operations. Findings are expected late in 1997.

Management Information Systems

The Division's statistical and analytical services support internal and external projects.

As part of the development of the National SAR Program's Management Information System, a national ground SAR data base is under consideration. It would be the first of its kind at a national level. A sample data base design has been distributed and is displayed on the National Search and Rescue Secretariat's website.

Among the studies undertaken during the year was the development of a Canadian population profile which, through extrapolation, can suggest demand on SAR over the next 20 years. Other major undertakings included support to a non-federal, 15-month ground SAR study that will provide an overview of ground search and rescue operations across Canada and the demonstration studies of the geo-stationary satellites. Support to NSS reviews was also provided.

ICSAR

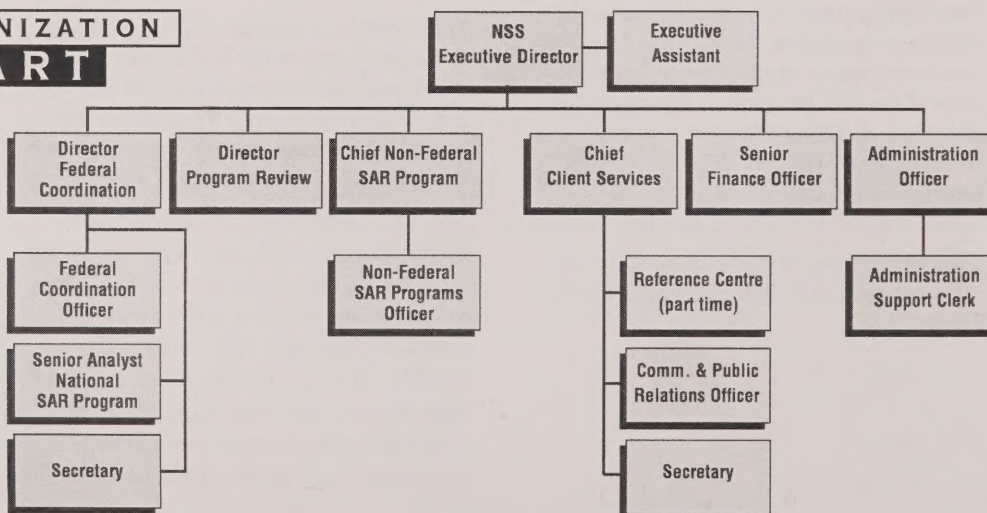
Work for the Division includes serving the Interdepartmental Committee on Search and Rescue (ICSAR) and fulfilling central agency requirements for program and financial information.

ICSAR met twice in 1996-97, in May and in October, for information exchanges on important happenings in the member departments. ICSAR agreed to three items of significant importance:

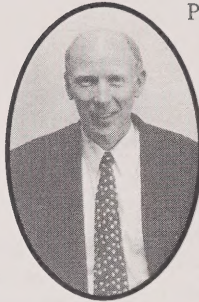
- The Merit List for prospective NIF projects for fiscal 1997-98;
- The recommendations stemming from the Review of Volunteers; and
- The terms of reference for the Review of Prevention Activities.

The Merit List provides the order in which NIF projects will be assigned funding and thus determines which projects proceed and which do not.

ORGANIZATION CHART



PROGRAM REVIEW DIVISION



Scott Russell
Director

This Division provides objective and independent review studies along with advisory/co-ordination services to the Secretariat's senior management. Its role is to produce high-quality, low-cost and high-value information products that will assist in making decisions for managing search and rescue activities at all levels.

Products produced during 1996-97 were:

- A SAR Prevention Review Study;
- A study of volunteers in the federal SAR program; and
- A strategic Needs Analysis for New SAR Initiatives Fund selection.

Implementation of the recommendations from the Review of Volunteers will make the contribution to SAR even better than it is today.

Finally, the efficiency, effectiveness and co-ordination of departmental SAR Prevention programs are likely to be significantly improved as a result of this prevention review.

The division employed innovative techniques to reduce study costs and enhance benefits.

NON-FEDERAL PROGRAMS DIVISION



John Chaffey

The Non-Federal Programs Division supports and co-ordinates the SAR activities of provincial, territorial and other organizations including provincial police forces and RCMP under contract to the provinces. Most of these activities relate to ground search and rescue. Efforts are directed toward helping these diverse groups focus on SAR-related activities and issues where they can usefully work together, making their own operations better and more efficient.

The main priority of the Non-Federal Programs Division is to unify the various jurisdictions and activities going on in the

Ground SAR field into a coherent national structure. With such a structure in place, and a profile for Ground SAR established, practitioners can take advantage of fast information-sharing, universal standards, consistent strategic planning, economies-of-scale purchasing, research and development and a host of other benefits that would highlight and improve Canada's resources in this field.

Examples of achievements include: Canada's first National Ground SAR Manual, which contains an embryonic section on training standards; the formation of the National Ground SAR Council of Canada (the NSS acts as secretary); the evolving integration of the provinces and territories into the NIF funding process; and the work in progress on the comprehensive baseline Study of Ground SAR in Canada, toward a national GSAR data base.

Provincial/Territorial Developments

The Province of Ontario formed a Search and Rescue Council (the Ontario SAR Advisory Council) to bring together players from fields involved in SAR, including the police, the military, the Fire Marshall, SAR volunteers, Ontario health officials and others to discuss means of improving and organizing the various related functions that are associated with search and rescue in Ontario.

The provinces of Alberta and Saskatchewan have formed associations of Search and Rescue volunteers in order to improve the communication of information and services and the overall provincial Ground SAR capability. Most other provinces and territories have similar associations.

The Search and Rescue Volunteers Association (SARVAC) was formed at a meeting held in conjunction with SARSCENE '96 held in Dartmouth, N.S., last October. This national-level volunteer association will work to unify the activities, standards, benefits and co-operation of all Ground SAR volunteers in Canada.

Client Services provides information to the Canadian SAR community through a wide array of multimedia products and materials that describe activities and events of interest.

SARSCENE, a quarterly magazine with a circulation of 12,000, is the centrepiece of the NSS communications activities. Advertising was introduced to its pages in 1996-97, eliciting a favourable response from both readers and NSS management. Inserts, developed in partnership with the Canadian Coast Guard and the RCMP, also produced SARSCENE revenue and reduced costs. Other cost-saving measures included acquiring equipment in-house to update mailing lists and other Secretariat data bases.

Readership and other surveys are used to ensure that SARSCENE continues to respond accurately to the needs and interests of the audience. More technical —



*Carol O'Rourke-Elliott
Chief*



*Louise Crone
A/Comm. Officer*



*Jennifer Fallow
Comm. Assistant*



*Diane Dorval
Secretary*

how-to-information — is being included to respond to a demand for information on training and SAR techniques.

Client Services planned and managed SARSCENE '96, a national workshop of SAR organizations held in Dartmouth. Innovations adopted in response to feedback from earlier meetings included parallel sessions, outdoor sessions, diverse presentations and an awards banquet.

A new financing approach was also employed with the goal to make the SARSCENE '96 workshop self-sufficient: the collection of donations and charitable receipts for them, a silent auction, a registration fee and an increase in fees for the 34 exhibitors. This income covered all on-site workshop expenses. Management of the workshop was provided through a partnership with the Nova Scotia Ground Search and Rescue Association, which also provided more than 45 volunteers to assist at the meetings.

Other partnerships that supported the workshop included the Nova Scotia RCMP, Emergency Measures Organization and the Rescue Co-ordination Centre in Halifax. Media coverage was extensive, likely encouraged by the outdoor demonstrations of the Labrador and Sea King helicopters,



Basabi Chaikraparty



Jayanti Roy

DURING THE COURSE OF THE YEAR, CLIENT SERVICES WAS INVOLVED IN JOINT PROJECTS WITH:

- **THE RCMP IN A VIDEO FOR GROUND SEARCH AND RESCUE PROVIDERS;**
- **THE RCMP BY PROVIDING ADVICE AND PROMOTING THE *HUG-A-TREE AND SURVIVE* VIDEO;**
- **THE CANADIAN COAST GUARD IN DISTRIBUTING ITS INFORMATION TO THE SARSCENE READERSHIP; AND**
- **THE ASSOCIATION OF PUBLIC SAFETY COMMUNICATIONS OFFICIALS' APCO '96 WHERE THE SECRETARIAT PROVIDED SAR EXHIBIT SPACE AND NEGOTIATED A SPECIAL RATE TO ALLOW THREE EXHIBITORS TO SHARE TWO SPACES.**

Outstanding SAR Achievement Award

- ▶ Mike Daniels of Welland, Ontario, president of the Civil Air Search and Rescue Association (CASARA), received the Outstanding SAR Achievement Award at SARSCENE '96 in recognition of 25 years of work on behalf of improving air search and rescue in Canada. He spearheaded the formation of a search and rescue group in Welland in 1971 and then guided the formation of CASARA in 1981. He was elected president in 1995.

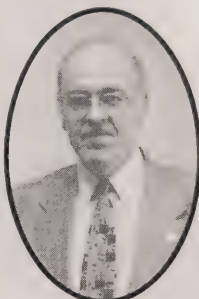
Certificates of Merit awarded at SARSCENE '96 went to:

- ▶ S/Sgt Richard Dew, RCMP, Ontario, who promoted the Hug-a-Tree and Survive program, supported the formation of a national ground search and rescue organization in Canada and collaborated with the Secretariat on several other projects.
- ▶ Tim Auger, Parks Canada, Alberta, who provided outstanding leadership in public safety and search and rescue within the parks system, developing many of the techniques now employed in alpine rescue systems.
- ▶ Sgt Keith Crosland and Const Everett Densmore, RCMP, Nova Scotia, who collaborated to develop civilian SAR dog standards and a manual for civilian SAR teams.
- ▶ Maj Mike Dorey, DND, Nova Scotia, who introduced the new Global Maritime Distress and Safety System and helped establish joint exercises with RCC Boston and New York.
- ▶ Mike Ferris, Department of Municipal and Community Affairs, NWT, who pioneered the use of personal locator beacons (PLBs) in Baffin region communities and established a pilot project to show how this technology can save lives, time and money.
- ▶ Eric Langley, Cape Breton GSAR, Nova Scotia, who was a founding member of the first Ground Search and Rescue team formed in Nova Scotia and chairman of the committee to develop provincial standards for ground search and rescue in the province.
- ▶ Armand Leblanc, Canadian Marine Rescue Auxiliary, Laurentian Region, Quebec, who has been a member of CMRA for 16 years, and participated in many marine rescues.
- ▶ Mike Lester, EMO, Nova Scotia, who has worked with the National Search and Rescue Secretariat to establish a national SAR working group at the provincial/territorial level.
- ▶ Carol Namur, Sauvetage Canada Rescue, Quebec, who is responsible for the organization of the Sauvetage Canada Rescue group which has existed for 25 years.
- ▶ Tony Rodgers, Halifax Regional GSAR, Nova Scotia, who was the workshop co-chair and played an important role in making SARSCENE '96 a success.
- ▶ Harry Strong, who has been involved in the Canadian Marine Rescue Auxiliary since 1979 and, as chair of the national council, has guided it into becoming one of the most efficient and cost-effective lifesaving organizations in Canada.
- ▶ Ab Taylor, Hug-a-Tree and Survive co-founder in the United States, who assisted in modifying the Canadian program which teaches children basic wilderness survival skills.

The Section is responsible for the efficient running of the National Search and Rescue Secretariat including such activities as finance, accommodation, training, staffing, LAN administration and data banks for SAR projects.

Much of the Section's work is regular support of other groups, such as managing office reconfigurations to accommodate new personnel and revamping the library to house the growing volume of books and publications.

Two full-time positions and two term positions were staffed during the year. Requests for co-op and Federal Student Summer Employment Program participants were processed.



Bill Pride
Finance Officer



Lynn Tremblay
Administration Officer



Micheline Guindon



Marie Claire Gaudreau

For the LAN network, a new server and software were purchased. Both hardware and software were upgraded to facilitate remote access.

Financial responsibilities, an ongoing but essential element, were discharged on time to meet Treasury Board requirements.

Among the new activities were the development of a data base for registration and trade show tracking at the SAR workshop held in 1996, and the updating of the SARSCENE (the Secretariat's quarterly magazine) mailing list.

The Main Estimates produced by Treasury Board Secretariat provided an overview of financial requirements for search and rescue by departments involved in these activities. The totals are in thousands of dollars.

One of the great challenges encountered regularly is to meet the financial needs of the Secretariat in a time when budgets everywhere are shrinking. Staff has combined creativity with rigid economy to make dollars go further. Volunteers have also made an invaluable contribution to stretching budgets over an ever-widening range of programs and activities.

In 1996-97, the Secretariat expenditures were \$7,954,291 compared with \$9,06,022 in the previous year. Most of the funds — \$6 million — were allocated to the New SAR Initiatives Fund.

	1996-97 (\$)	1995-96 (\$)
National Defence	117,059	113,876
Fisheries & Oceans	96,892	93,181
Canadian Heritage	2,435	2,383
RCMP	1,370	1,370
Transport Canada	875	875
Environment Canada	1,030	1,095
Total	219,661	212,780

(Provincial/territorial expenditures are not available.)

	1996-97 (\$)	1995-96 (\$)
Salaries	881,180	1,138,494
O & M	726,306	729,173
Capital	93,111	94,177
NIF	6,066,005	6,904,084
INMARSAT	187,687	200,094

PUBLICATIONS

The National Search and Rescue Secretariat has an extensive library of studies, reports, brochures, general information publications and videos. They are available from the Resource Centre.

Among them are:

Brochures

- Personal Locator Beacons
- COSPAS-SARSAT, Partners in Space
- NSS Resource Centre
- NSP Logo

Other general publications

- SARSCENE Magazine
- SARSCENE Index
- 1994 SARSCENE Workshop Proceedings
- 1996 SARSCENE Workshop Proceedings
- Directory of Search and Rescue Organizations in Canada

Videos (with brochures)

- Sharing the Responsibility
- Operation Ground Search

For More Information:

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Priority	Sponsor	Title/Description
1	National Defence	Arctic Training and Ops Iqaluit – CASARA CASARA, in conjunction with DND, will train specific operators in Iqaluit to provide SAR services North of 60, using trained spotters in chartered aircraft.
2	National Defence	Vehicle DF Antenna Mounted Homer – CASARA This proposal is in response to an increase in the number of RCC taskings that CASARA accepted which required a response by vehicle to locate an ELT/EPIRB. A temporary mounted antenna system would be placed on an automobile and feed directional information to the SAR responder.
3	Canadian Heritage	Beacons and Survival – A Common Sense User's Guide A public education tool will promote the proper use of emergency beacons. It will also provide basic prevention, safety and self-rescue information and an easy-to-use pre-paddling check list.
4	National Defence	Cold Water Survival Video A video about the effects of cold water immersion will be produced.
5	Canadian Heritage	Safe Family Paddling This project will provide easy-to-follow guidelines that stress safe family paddling awareness, accident prevention, advance preparation, easier detection, how to increase survival time in the water and self-rescue techniques. The product will be made available for distribution to the public through tourism offices, rental operators, retailers, outfitters and manufacturers of canoes and kayaks.
6	Canadian Heritage	Development of Educational Materials for Public Avalanche Safety Courses A series of avalanche safety and rescue courses, aimed at winter outdoor recreationalists, to promote avalanche awareness and self-rescue techniques will be developed. This program is to be a joint undertaking between the Canadian Avalanche Centre and the Canadian Ski Patrol System.
7	Canadian Heritage	"SMARTRISK" Communications Program A communications program (displays, public service announcements, brochures and presentations) will encourage youths to make choices which will reduce their likelihood of being injured. This program is aimed particularly at outdoor recreation enthusiasts under 20 years of age.
8	Manitoba	Establish Formal GSAR Volunteer Structure for MB The Office of the Fire Commissioner of Manitoba, Manitoba Emergency Measures Organization and the Royal Canadian Mounted Police 'D' Division are proposing to create a comprehensive SAR program which will involve the training of SAR volunteers in Manitoba's mutual aid zones and the establishment of a SAR prevention and educational program aimed at appropriate target groups.
9	Ontario	Establish Water/Ice Rescue Program – ON Many fire services are either unable to perform any type of water or ice rescue or are only capable of performing shore-based rescues. In order to provide general delivery to the provincial fire service, there is a need to formalize all water and ice rescue course packages. This includes the preparation of curriculum, trainer-facilitator guides and learning manuals for each level of training. Following formalization of course packages, training will be delivered to the fire service through the Ontario Fire College using the train-the-trainer concept.
10	New Brunswick	Improved GSAR Operations Management and Planning It is proposed that the entire process of Search Management be assessed through three training courses with particular emphasis on the aspects of planning and operations procedures within the overhead team and, thereby, examine appropriate steps to incorporate improvements into accepted practices for Managing the Lost Person Incident. To this end, the following three training courses are proposed: 1) GSAR Overhead Operations Course 2) Managing the Lost Person Incident 3) Clue Awareness/Human Tracking

Priority	Sponsor	Title/Description
11	Fisheries and Oceans	PENGUIN Remote Controlled Marine Rescue Vehicle <i>The development of two (prototype) portable, self-propelled, shore-, helicopter- or ship-launched inflatable vehicles will provide a mobile rescue platform for drowning persons when weather conditions preclude the deployment of rescue swimmers. DFO will provide "in-kind" equipment in the form of boats, helicopters and rescue personnel for the testing phase.</i>
12	British Columbia	Robson Valley Search and Rescue Equipment – Acquire GOS, Avalanche Equipment <i>Funds are needed to assist in the acquisition of basic equipment for this rapid deployment team. Funding will allow the unit to progress in its training to meet area needs and provide the equipment to ensure members meet personal security needs.</i>
13	Transport Canada	Integration of a GPS Receiver Within a 406-MHz ELT <i>This proposal is to integrate a GPS receiver and a 406-MHz ELT, and will capitalize on experiences gained and technologies developed by previous initiatives. Investigation into using an existing on-board GPS receiver will be done. The integration would combine location co-ordinates and a near-instantaneous distress alert.</i>
14	National Defence	Integrated Electro-Optic Search Sensor System <i>The project aims to develop and demonstrate an integrated sensor package, suitable for airborne or shipboard mounting, that can significantly enhance the capability of locating and verifying persons or small objects, particularly in adverse weather or at night. This proposal will be carried out with the assistance of the Canadian Coast Guard/Department of Fisheries and Oceans.</i>
15	National Defence	Sea King VHF/FM Radios <i>The mountainous terrain of the BC coastline requires specialized aircraft radio equipment in order to permit communications between the aircraft and shore-based agencies via a network of remote VHF/FM radio repeaters that exist along the coast. The current Sea King radios do not possess the necessary frequency band width nor a keying capability required to activate these repeaters, thereby greatly reducing their SAR capability. This proposal would correct this deficiency.</i>
16	National Defence	Voice-Activated Survivor Radios <i>Life rafts supplied by the Canadian military are equipped with a radio communications system that is difficult to operate. A voice-activated radio would be an easy way for survivors to establish communication with a rescue vehicle.</i>
17	Environment Canada	Weather, Winds and Waves – Inner South Coast BC Waters <i>This proposal would develop an educational booklet outlining the hazards which are posed by complex weather patterns, winds and waves in the inner south coast of BC. It is aimed primarily at recreational boaters.</i>
18	Fisheries and Oceans	CCGA Loan Equipment – First Aid Kits <i>This proposal is to supply each CCGA vessel with a first aid kit, including a CPR mask. This will enhance the first aid capabilities to be performed on a SAR victim and will reduce the health risk to CCGA personnel.</i>
19	Environment Canada	Great LAKes driZZLE Icing Characterization Experiment (GLAZE ICE) <i>This proposal is a two-month field project which will measure freezing precipitation conditions and will allow the most dangerous aircraft icing environments to be characterized. Among other benefits, this proposal will lead to improved icing forecasts and development of remote sensing capabilities for measuring icing, all of which will reduce the risk to aviation due to freezing precipitation.</i>
20	Fisheries and Oceans	Fondation bateau de sauvetage (Lifeboat Foundation) <i>The City of St. Lambert (Montreal suburb) has marine SAR responsibility for a large section of the St. Lawrence River. Through corporate and private donations, the Fire Department has purchased a rescue boat. This proposal is for the purchase of one waterproof radio, one VHF radio for navigation and one depth-finder for use on the rescue boat.</i>
21	British Columbia	Revelstoke SAR – Acquire 5 Silva GPS Units <i>This project would involve the purchase of five SILVA GPS COMPASS XL 1000 in order quickly and precisely to plot a location and direction for support and rescue needs, as well as to cut down on expensive air support time, save money and person-hours, and increase searcher and subject safety.</i>

Priority	Sponsor	Title/Description
22	Fisheries and Oceans	<p>Chalet Chez Nous</p> <p><i>This project aims to produce 13 two-minute segments covering safe boating and safe swimming practices, to be aired on the weekly French TV show "Chalet Chez Nous."</i></p>
23	Canadian Heritage	<p>PFDs – Colours for Everyone</p> <p><i>This proposal calls for the development of a multimedia campaign aimed at users of PFDs as well as hard-to-reach audiences, informing them of the different colours of PFDs now available on the market. A wider choice would give PFDs a wider range of appeal.</i></p>
24	Environment Canada	<p>FM Weather Radio Installation – Iqaluit</p> <p><i>A low-powered FM Weather Radio, broadcasting weather hazards (blizzards, high wind, etc.) would be installed in Iqaluit. This would permit FM radio access to up-to-the-minute weather forecasts, particularly important for those who do not possess marine radio equipment.</i></p>
25	National Defence	<p>Prediction Model of Survival Times (Wet/Cold Exposure)</p> <p><i>A computer model to predict survival time for wet/cold exposures, with and without exercise, would be developed. The model could be used as a rescue decision aid, as a training device and as an assessment tool for procurement decisions regarding protective clothing.</i></p>
26	National Defence	<p>Optimized Radar Receiver for SART</p> <p><i>Since February, 1995, ships over 350 tonnes must carry a Search and Rescue Transponder (SART), which is one of the main means in the Global Maritime Distress and Safety System (GMDSS) of locating ships in distress or their survival craft. At present, SARTs are not consistently being detected, even out to their theoretical maximum range. This proposal would extend the detection range of SARTs to well beyond that expected with conventional radar.</i></p>
27	National Defence	<p>Nylon Rescue Ladder for CH-124 Sea King</p> <p><i>It is proposed that the Sea King fleet be fitted with a nylon rescue ladder which could be deployed to recover a rescuer or survivor should the rescue hoist become unserviceable.</i></p>
28	Fisheries and Oceans	<p>RCC Halifax GMDSS Implementation</p> <p><i>The implementation of Global Maritime Distress and Safety System (GMDSS) equipment at Rescue Co-ordination Centre (RCC) Halifax will allow the RCC to contact other RCCs worldwide, as well as most vessels, without using the regular telephone system. It would also serve as a reliable backup in the event of failure of regular communications systems.</i></p>
29	Fisheries and Oceans	<p>RCC Halifax GMDSS Implementation (Public Awareness)</p> <p><i>Global Maritime Distress and Safety System (GMDSS) will be mandatory on all vessels subject to the Safety of Life at Sea (SOLAS) convention, beginning in 1999. Because these vessels will no longer be required to maintain a listening watch on VHF channel 16, operators of smaller vessels (particularly pleasure craft and fishing vessels) will not be able to contact large vessels on this channel. A public awareness campaign (wide distribution of a laminated card) will educate pleasure boaters and fishermen about GMDSS and its ramifications.</i></p>
30	Fisheries and Oceans	<p>Fighting Fire – Small Fishing Vessels</p> <p><i>Two video public service announcements, newspaper slicks, posters and a firefighting brochure to teach small boat fishermen what to do in case of a fire on board ship will be developed. Some materials will be distributed through the Transportation Safety Board and with the assistance of marine insurers.</i></p>
31	Environment Canada	<p>Development of a Third Generation Aircraft Icing Forecast Model</p> <p><i>The final product of this proposal will be a third generation operational aircraft icing forecast model which will predict regions of heavy icing and regions of freezing precipitation, both of which pose a significant hazard to the aviation community. Aircraft could change altitude, be diverted around dangerous icing regions or follow a flight path that minimizes the exposure.</i></p>
32	National Defence	<p>SAR Crew Station Demonstrator</p> <p><i>This proposal is to acquire a basic Aircraft Crew Station Demonstrator (ACD) for the Defence and Civil Institute for Environmental Medicine (DCIEM). This ACD would be used for in-house human factors research and will enable operators to evaluate new systems or equipment while flying simulated missions in a SAR helicopter.</i></p>

Priority	Sponsor	Title/Description
33	Fisheries and Oceans	Personal Protective Equipment – CCGA Newfoundland <i>The purchase of 700 approved anti-exposure coveralls and PFDs for CCGA Newfoundland members for use in response to marine rescue situations is planned.</i>
34	Fisheries and Oceans	Safe Boating Committee <i>This proposal has two sections: to review current information and to develop a guide for the organizing and continuance of local committees. This will provide the framework for the second section of the proposal, which is to establish 10 local Safe Boating Committees as "seeds." Target areas are parts of Ontario, Manitoba, Alberta and Saskatchewan.</i>
35	National Defence	Mountain Rescue Extraction System <i>The current mountain rescue system used by SAR Techs for extraction of victims in confined areas is labour intensive, time consuming and requires both SAR Techs in order to effect a safe rescue. Procurement of a simple rescue system, which is currently commercially available, will allow expedient extraction of victims from confined spaces (e.g., crevasses, caves, ice holes, wreckage). DND will make all information and trial results available to other agencies (e.g., Parks, RCMP).</i>
36	National Defence	SARR Telemetry Monitoring <i>Funding is required to purchase the equipment necessary to extract Search and Rescue Repeater (SARR) telemetry data during a satellite pass, which will be used for uplink calibration. Lack of calibrated telemetry data could result in non-detection of problems with the SARR; accordingly, required maintenance on the SARR would not be performed. This equipment is to be used at the Canadian Test and Evaluation Centre (CTEC).</i>
37	Environment Canada	Coastal ODAS Platform (COP) <i>Operational Deployable Automated System (ODAS) weather buoys on the east coast would permit easily transportable and deployable data collection platforms. The data collected could help to protect the lives of mariners.</i>
38	Canadian Heritage	Formation d'auto-sauvetage nautique (Training in Boating Self-rescue) <i>A training program, aimed at recreational boaters, to teach self-rescue techniques and to promote boating safety will be implemented.</i>
39	National Defence	Ice Release Tape for Helicopter Rotor Blades <i>This project will develop a tape for helicopter rotor blades with an ice-release surface. This tape would be easy to install and remove, and would be similar in nature to rotor blade anti-abrasion tapes currently in use.</i>
40	National Defence	Integration of SAR Imaging Technologies <i>There is a need to automate the evaluation of new imagery-based searching techniques so that these technologies can be used on a regular basis. By using artificial intelligence techniques together with target enhancement, much of the search can be done by computer.</i>
41	Environment Canada	Sea State Forecast in the St. Lawrence River and Gulf <i>This proposal, to be conducted jointly with the Department of Fisheries and Oceans, would establish an automated daily service for sea state forecasts in the St. Lawrence River and Gulf. The service would be aimed primarily at small craft and tourism operations.</i>
42	National Defence	Palletized Sensor Package for C-130 Hercules <i>The goal is to acquire a number of palletized sensor, C3 (command control communications) and rescue equipment packages which could be easily installed and removed from C-130 aircraft.</i>
43	National Defence	Marine and Air SAR Risk Analysis <i>Current practices give information on past SAR incidents and do not identify traffic volumes or patterns for SAR in the Halifax region. This proposal would identify areas where emergency response plans do not presently exist. Plans could then be completed for those areas and resource deployment could be optimized. This proposal would be carried out in close co-operation with the Canadian Coast Guard/Department of Fisheries and Oceans.</i>

Priority	Sponsor	Title/Description
44	Manitoba	<p>'Near Miss' – Positive Lost Person Behaviours</p> <p>An understanding of how people behave when they are lost is of critical importance in order to conduct a successful search. Thus, this study proposes to analyze incidents which occurred in Canada where the subjects were able to get themselves out of the situation without the need for a formal SAR response. The study will focus on the two subject groups which most frequently require SAR services, fishermen and hunters. Insight into lost person behaviour will be gained by conducting literature reviews, surveys and personal interviews on each subject.</p>
45	Fisheries and Oceans	<p>CCGA Loan Equipment – Flotation Suits</p> <p>Flotation suits for CCGA personnel will protect them from the elements, increase their endurance on task and protect them in case they fall overboard.</p>
46	Fisheries and Oceans	<p>Buoy-o-Buoy 885 Anti-Exposure Worksuit</p> <p>This project will purchase 100 anti-exposure worksuits for Canadian Coast Guard Auxiliary (CCGA) personnel operating fast rescue craft along the BC coast.</p>
47	British Columbia	<p>Keremeos SAR – VHF Repeater for Ops</p> <p>Funding to purchase a Radio Communication Repeater for the search teams and the command post to communicate effectively is required.</p>
48	Fisheries and Oceans	<p>Buoy-o-Buoy 953 Personal Flotation Device (PFD)</p> <p>This will allow the purchase of 100 personal flotation devices (PFDs) for the Canadian Coast Guard Auxiliary (CCGA) serving the BC coast.</p>
49	British Columbia	<p>Nicola Valley SAR (Merritt) – Purchase Equipment</p> <p>Funding is needed to acquire specialty equipment, as well as basic search and rescue materials.</p>
50	Fisheries and Oceans	<p>CCGA Loan Equipment – Strobe Lights</p> <p>During foul weather operation, should a CCGA rescuer end up in the water, a strobe light would aid in the recovery and would also enhance the security of the volunteers, which in turn could enhance their performance.</p>
51	Fisheries and Oceans	<p>CCGA Loan Equipment – SAR Pumps</p> <p>CCGA volunteers would have equipment to allow them to pump out damaged fishing vessels and pleasure craft. This will allow for a more comprehensive response than is currently available.</p>
52	Fisheries and Oceans	<p>Seminar on Boating Safety for Provincial and Municipal Administrators</p> <p>A one-day seminar on boating safety, aimed at provincial and municipal administrators, will emphasize boating safety organizations, resources, regulations, prevention and SAR programs, as well as how to develop a local safe boating council. This will better prepare administrators to cope with boating issues and improve general safety for boaters. Once they become more knowledgeable of boating issues, they may be more likely to sustain partnership projects with SAR delivery organizations.</p>
53	Canadian Heritage	<p>Alcohol and Boating Project</p> <p>This project aims to reduce the number of recreational boating injuries and fatalities in Newfoundland and Labrador by promoting safe and responsible boating behaviour, including drinking responsibly and wearing a PFD.</p>
54	Fisheries and Oceans	<p>Direction Finding Equipment</p> <p>Funding will help the purchase and installation of direction finding equipment for some new fast response craft operated by the Canadian Marine Rescue Auxiliary in BC.</p>
55	National Defence	<p>SAR Asset Tracking System</p> <p>Phase II of the Rescue Co-ordination Centre Automation Project has a requirement to provide the RCC Controller with a real-time picture of available and deployed SAR resources. This portable, two-way communication system could also be used by non-primary SAR resources.</p>

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56	Environment Canada	Expansion of WeatheRadio in Labrador <i>Daily WeatheRadio service to Labrador communities will provide weather information and timely warnings of severe weather. A feasibility study will be conducted and alternate forecast delivery mechanisms will be examined prior to implementation.</i>
57	British Columbia	Sunshine Coast SAR (Sechelt) – Refurbish Vehicle <i>Funding is required to adapt the interior of a recently purchased surplus vehicle for use in SAR operations. The vehicle requires painting, interior lighting, ventilation, storage cabinets, a plotting table, an FM radio system and some windows so that it will suit the group's purposes. A portable generator and some exterior lighting is also required.</i>
58	Canadian Heritage	Règle éducative du pêcheur/Educational ruler for sport fishermen <i>This proposal is for the production and distribution of a self-stick ruler, such as those used by anglers to measure their fish, with safety and self-help messages printed on it. This ruler would be made available through various hunting and fishing events, as well as through various provincial wildlife associations.</i>
59	Fisheries and Oceans	PFD Broadcast Safety Messages <i>This proposal would develop and implement a creative communications strategy to convey and reinforce safe boating messages relating to personal flotation devices (PFDs) and the importance of wearing a highly visible, Canadian-approved PFD.</i>
60	Fisheries and Oceans	National Interactive Safe Boating Test <i>An interactive, safe boating campaign (including TV shows, print media campaigns and an Internet site) for recreational boaters will promote boating safety and provide direct feedback from viewers' knowledge of safe boating practices. Compilation of the data will help in developing future safety initiatives.</i>
61	Fisheries and Oceans	ITT Night Vision Equipment <i>The purchase of 15 pairs of night-vision goggles for CMRA Western region is proposed.</i>
62	British Columbia	Williams Lake SAR – Satellite Phone and Infrared Scanner <i>The acquisition of satellite telephone equipment and an infra-red scanner in the Williams Lake (BC) area would greatly enhance the ground SAR capability.</i>
63	National Defence	Coloured Smoke Marker for the CP-140 (Aurora) <i>It is proposed that the smoke marker currently in use be modified to allow for release from the Aurora aircraft in conditions of high wind/sea state. This will permit a more accurate drop of a Survival Kit Air Droppable (SKAD) to SAR survivors, since the new markers will have a more high-contrast, high-visibility smoke. The new markers will also be deployable in Arctic conditions.</i>
64	Fisheries and Oceans	Dewatering Pump Kits for CCGA NF <i>The purchase of dewatering pump kits for CCGA Newfoundland for use in marine SAR missions is proposed.</i>
65	Fisheries and Oceans	Ice and Water Rescue <i>The Township of Tay (Georgian Bay area) would like to acquire ice rescue equipment and have 20 firefighters trained in ice rescue techniques. At present, they must rely on the goodwill of a neighbouring township. Having their own ice rescue capability would decrease response time and be more cost effective.</i>
66	Environment Canada	AWOS Installation – South Coast Newfoundland <i>The installation of Automated Weather Observation Stations (AWOS) on the south coast of Newfoundland will aid forecasters in determining weather hazards, such as freezing precipitation and poor visibility, much more efficiently than current systems. By enhancing forecast accuracy, AWOS will reduce risks to the aviation and marine communities. (repeat of 97072)</i>
67	Fisheries and Oceans	NWT PFD Loaner Program <i>The goal of this proposal is to provide communities of the NWT access to PFDs that are suitable to their lifestyle and environment. People will learn first-hand the benefits of using a personal flotation device.</i>

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68	Transport Canada	<p>Evaluation of the 406-MHz ELT-AF</p> <p><i>This proposal is to conduct extensive tests and evaluation of a 406-MHz ELT-AF prototype, developed under a previous NIF project, and will also test the reception and decoding of the message at the MCC. Evaluation results will be shared with the scientific community.</i></p>
69	Fisheries and Oceans	<p>West Coast VHF Digital Selective Calling (DSC)</p> <p><i>Many foreign vessels in BC coastal waters are equipped with Digital Selective Calling (DSC) (in accordance with Global Maritime Distress Safety System (GMDSS) regulations); coastal radio stations do not currently have this capability. Having this capability would improve detection and response times and save lives.</i></p>

